

AD-A163 020 CULTURAL RESOURCES SURVEY SUBTERRANEAN CABLE 1/1
RIGHT-OF-WAY ADJACENT TO LEE. (U) BREW (ALAN P) BENIDJI
MN A P BREW SEP 80 DACM37-80-M-2407

AD-A163 020 CULTURAL RESOURCES SURVEY SUBTERRANEAN CABLE 1/1
RIGHT-OF-WAY ADJACENT TO LEE. (U) BREW (ALAN P) BENIDJI
MN A P BREW SEP 80 DACM37-80-M-2407

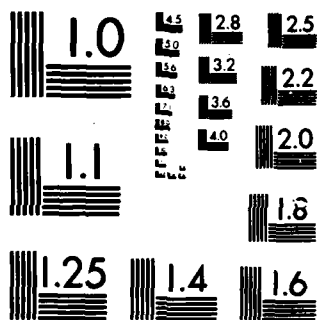
AD-A163 020 CULTURAL RESOURCES SURVEY SUBTERRANEAN CABLE 1/1
RIGHT-OF-WAY ADJACENT TO LEE. (U) BREW (ALAN P) BENIDJI
MN A P BREW SEP 80 DACM37-80-M-2407

UNCLASSIFIED F/G 5/6 NL

UNCLASSIFIED F/G 5/6 NL

UNCLASSIFIED F/G 5/6 NL

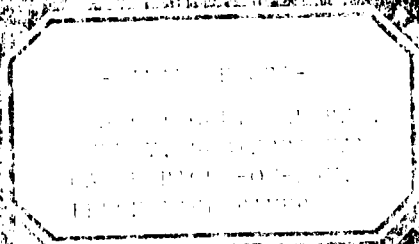
[illegible]



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

①

AD-A163 820



DTIC
SELECTED
FEB 07 1985
D

[Illegible vertical text]

EXEMPT FROM GDS
Approved for public release
Distribution Unlimited

86 2 6 176

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GPO ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
AD A163 820		
4. TITLE (and Subtitle) FINAL REPORT: PHASE I CULTURAL RESOURCES SURVEY SUBTERRANEAN CABLE RIGHT-OF- WAY ADJACENT TO LEECH LAKE RIVER, CASS COUNTY, Minnesota		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) Alan P. Brew		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS 1001 America Avenue Bemidji, Minnesota 56601		8. CONTRACT OR GRANT NUMBER(s) DACW37-80-M-2407
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Corps of Engineers, St. Paul District 1135 USPO & Custom House St. Paul, MN 55101-1479		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
12. REPORT DATE September, 1980		13. NUMBER OF PAGES 42 p.
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
15a. DECLASSIFICATION/DOWNGRADING SCHEDULE		
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) ARCHAEOLOGY MINNESOTA LEECH LAKE RIVER		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A Phase I cultural resources survey was conducted of the total length (4618') of a proposed subterranean cable corridor along the Leech Lake River. The entire corridor was inspected visually, and shovel tested every 50 ft. intervals. Two known sites are present, but neither will be affected by the construction. A large archaeological site was found at the northern end of the corridor. It will be most significantly damaged by brush clearing, and it is recommended that substantial Phase II work be done there.		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT
OF
PHASE I CULTURAL RESOURCES SURVEY
SUBTERRANEAN CABLE RIGHT-OF-WAY ADJACENT TO
LEECH LAKE RIVER, CASS COUNTY, MINNESOTA

SUBMITTED TO
U. S. ARMY CORPS OF ENGINEERS
ST. PAUL DISTRICT

BY

ALAN P. BREW, PRINCIPAL INVESTIGATOR

1001 AMERICA AVENUE
BEMIDJI, MINNESOTA 56601

SEPTEMBER, 1980

CONTRACT NUMBER: DACW37-80-M-2407

DTIC
ELECTE
FEB 07 1986
S D

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited

86 2 6 176

Administrative Summary

A Phase I cultural resources survey of the total length (4618 ft.) of a proposed subterranean cable corridor was conducted for the U.S. Army Corps of Engineers, St. Paul District. The project area is along the Leech Lake River in northeastern Cass County, Minnesota.

The survey was designed to detect the presence of cultural resources along the corridor. To that end, the entire right-of-way was inspected visually and, with the exception of two short sections of severely disturbed or cultivated ground, subjected to shovel testing at 15 m. (50 ft.) intervals. Except for the few tests in marshy areas, all fill was sorted through a 1/4-inch mesh screen.

An archaeological records search indicated that two known sites are present along the corridor. Detailed review of the records, supplemented by the results of field inspection, showed that neither site will be affected by the proposed project. That part of one site (21 CA 13) which the cable will cross was destroyed during gravel-extraction operations in 1940. The other site (21 CA 1), which has been nominated at the state level for the National Register of Historic Places, is located, in actuality, more than one mile from the project area. Historic-era properties listed on or eligible for the Register are not reported from the proposed project area.

A large archaeological site, designated 21 CA 139, was found at the northern end of the corridor. Since shovel testing indicated that this site is quite shallow and will, therefore, be most significantly damaged by brush clearing for the proposed project, recommendations are offered for substantial Phase II work there. A shovel test, located 120 m. south of 21 CA 139, produced sufficient evidence of archaeological potential to warrant additional small-scale surveying.

Accession For	
NOIS GRA&I	<input checked="" type="checkbox"/>
ELIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Avail and/or	
Dist	Special
A-1	



Acknowledgements

Even simple projects, which this one certainly started out to be, cannot be accomplished without the assistance of many people. The complications that arose during my efforts to determine where the Scott Site really is are not the fault of the several people who provided me with information, and I absolve them from any responsibility for my efforts to set the record straight.

To the following people, who gave of their time, their knowledge, and their copying machines, I offer my thanks: from the Minnesota Historical Society, Scott Anfinson, Karen Gill and Susan Hedin; from the University of Minnesota, Elden Johnson and Terri Valois; from the Chippewa National Forest, Christy Caine and Grant Goltz; from the Leech Lake Reservation, Edward Fairbanks; and from Dairyland Electric Cooperative, Gary Lillesve.

In the field, I was assisted ably by Richard Schrom and William Yourd. The former gave of his youthful enthusiasm and his considerable muscle; the latter provided his expertise in soils and vegetation both in the field and by preparing the environmental section of this report. I also thank Mr. and Mrs. Glenn Grife for their highly useful information and their friendly treatment of strangers who appeared in their yard carrying shovels.

Terry Pfutzenreuter, of the U. S. Army Corps of Engineers, St. Paul District, deserves special thanks. Although her efforts were "in the line of duty," they were many and she treated me with kindness and patience as this project "grew like Topsy."

Linda Brew served diligently as my wife and typist and she is thanked for both, without my having the timidity to ask which task is the more onerous. This manuscript, like the project, rapidly outgrew the original estimate.

Finally, to the reader, I offer a brief preface. Much of what follows is an earnest and, I trust, successful effort to pinpoint the location of the Scott Site. Since some reports place that site on the cable corridor and since its National Register eligibility is beyond question, its exact location became a significant question for this survey.

Table of Contents

Administrative Summary	1
Acknowledgements	11
Table of Contents	111
Introduction	1
Environmental Setting	4
Regional Culture History	6
Archaeological Research in the Present Project Area	8
21 CA 2	8
21 CA 13	9
"Scott"-Peck Farm Collection	9
The Scott Site, 21 CA 1	10
Other Sites	13
Summary	14
Survey Methods	14
Survey Results	16
Conclusions and Recommendations	21
Summary of Cultural Resources	21
Direct Project Impacts on Cultural Resources	22
Recommendations for Phase II Testing	23
References Cited	25
Appendix A Principal Investigator's Resume	
Appendix B Scope of Work	
Appendix C Site Form 21 CA 139	

List of Figures, Tables, and Plates

Figure 1.	Regional Map	2
Figure 2.	Map of Project Area	3
Table I.	Locations Cited for the Scott Site (21 CA 1) in Published Sources and Site Files	12
Table IIa.	Non-ceramic Cultural Material Recovered	18
Table IIb.	Ceramic Material Recovered	19
Plate I.	Looking east across open field across county road from gauging station.	end sheets
Plate II.	Gauging station and dam apron from east.	
Plate III.	Looking southwest across large marsh at shovel tests nos. 51 to 54.	
Plate IV.	Looking southwest along county road to vicinity of shovel test no. 69.	
Plate V.	Looking north-northwest to vicinity of shovel test no. 77.	
Plate VI.	Looking south across Grife's lawn to their cornfield.	

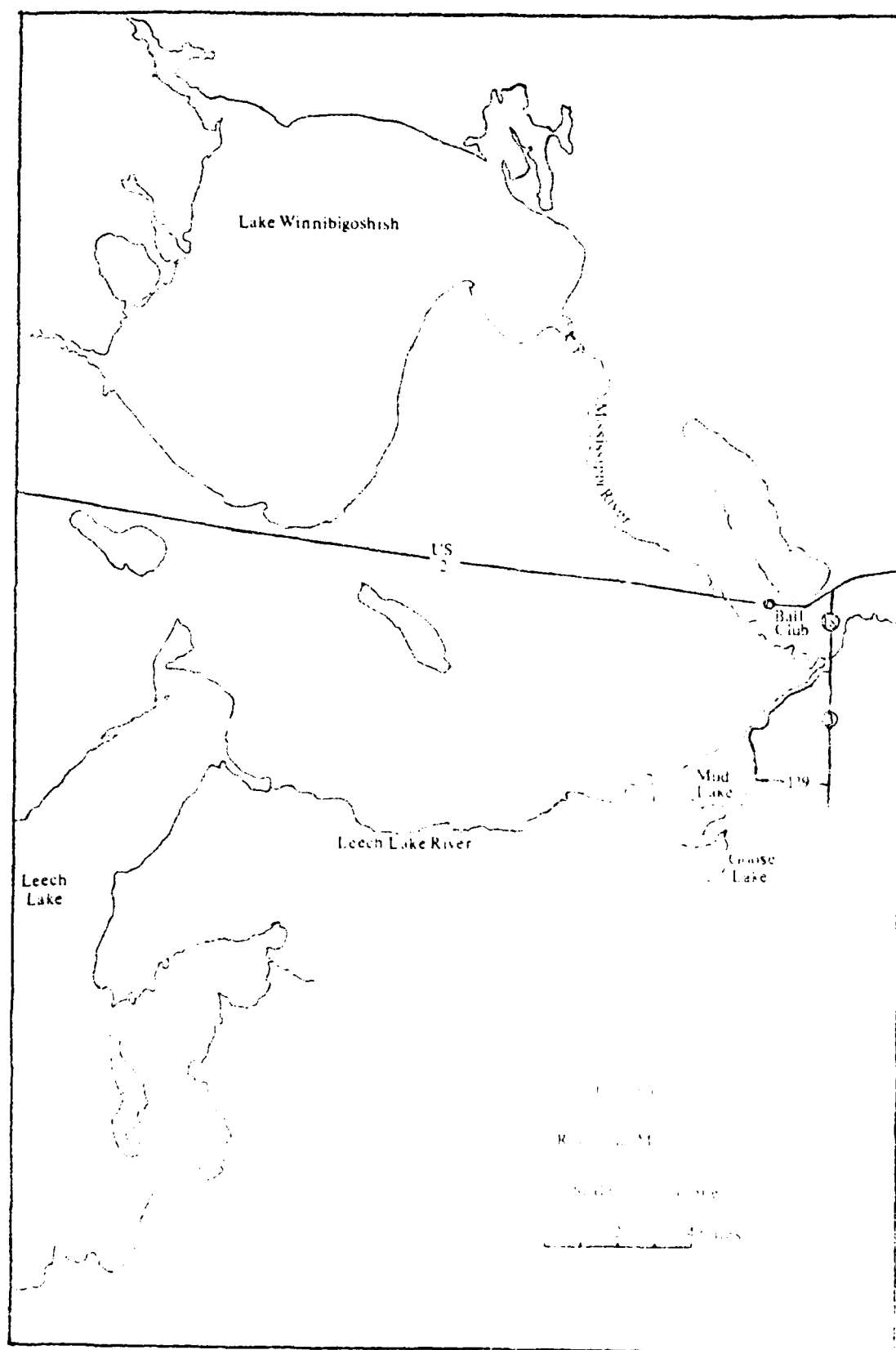
Introduction

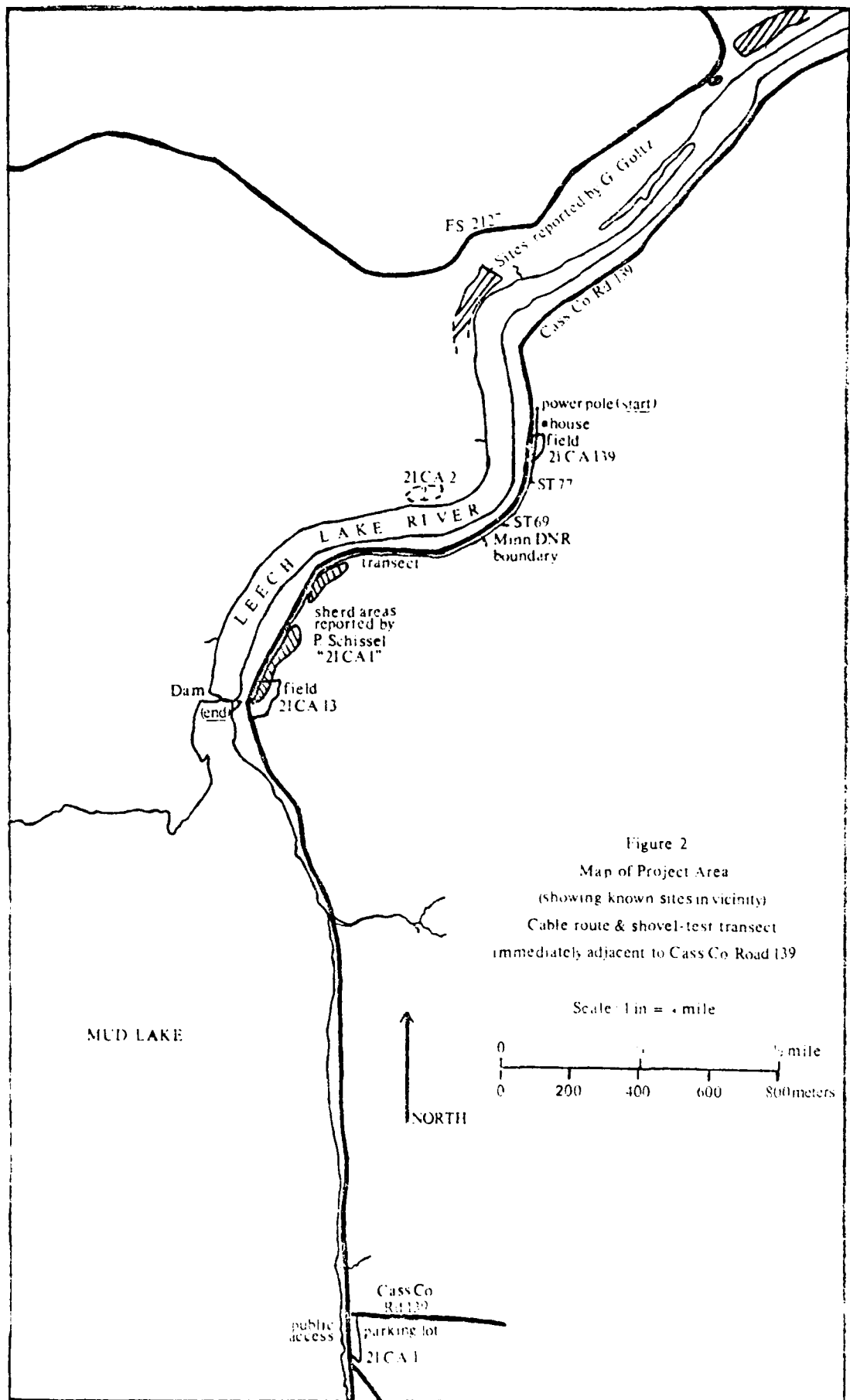
This report presents the results of a Phase I archaeological survey of a proposed underground cable right-of-way along the Leech Lake River in the extreme northeastern corner of Cass County, Minnesota (Fig. 1). The principal investigator conducted the survey under contract (no. DACW37-80-M-2407) to the U. S. Army Corps of Engineers, St. Paul District, and served as field director and as author of this report. The survey and report serve as partial fulfillment of the St. Paul District's cultural resource-management responsibilities (see Scope of Work, Appendix B).

The Leech Lake River is a culturally-significant waterway by which Leech Lake is connected to the Mississippi River at a point about 12 miles (air-line) downstream from the latter's outlet from Lake Winnibigoshish (Fig. 1). As reported below, significant cultural resources are located not only on these two large lakes but also on the Leech Lake River itself. An archaeological records search produced evidence that one such resource, the Scott Site (21 CA 1) was supposedly located along the proposed cable corridor. The present survey identified an additional site (21 CA 139).

The proposed construction project, by which the survey reported here was generated, is designed to enable the St. Paul District's Water Control Center to operate a water level gauging station by using remote techniques. To that end, an underground electrical cable will be laid in Sections 23 and 22, T. 144 N., R. 26 W., from the end of an existing overhead line to the gauging station at Mud Lake Dam (Fig. 2).

From its point of origin, in the SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 23, the cable corridor trends south and west a distance of 4618 ft. to the gauging





station in SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 22. Current ownership of the right-of-way is as follows: (1) ca. 1440 ft. of private land, along the northern end; (2) ca. 2500 ft. of State of Minnesota, Department of Natural Resources property; and (3) ca. 670 ft. of Minnesota Chippewa Tribe, Leech Lake Reservation land at the southern end. The Leech Lake Reservation Business Committee granted a permit, dated August 1, 1980, to the principal investigator for the purpose of conducting an archaeological survey of the tribal land.

The cable corridor parallels the Leech Lake River and Cass County Road 139 as they appear on the U.S.G.S. 7.5 Minute Series Ball Club, Minnesota, Quadrangle. The right-of-way lies on the landward side of the road, 34 to 35 ft. from its centerline. Although the cable itself will be buried in a narrow trench, only 4 in. wide by 3 ft. deep, the total right-of-way required for installation is 14 ft. wide. Dairyland Electric Cooperative had conducted preliminary staking of the corridor prior to the archaeological survey.

The field work reported herein was conducted by the principal investigator and one or two assistants on August 1, 8, and 10, 1980. Originally designed to survey only the Leech Lake Reservation land, the project was expanded to include the entire corridor. All archaeological field records generated by the survey and the artifacts recovered will be curated by the Anthropology Program, Bemidji State University.

Environmental Setting

Mud Lake is situated in an extensive area of low-lying glacial lake and outwash deposits southeast of Lake Winnibigoshish. Wright (1972) indicates that surface drift of the area was deposited ca. 12,000 B.P.

during the Alborn phase of the St. Louis sublobe of the late Wisconsin glaciation. Much of the drift is overlain by aeolian sediments deposited ca. 5,000-8,000 B.P. during the thermal maximum (Grigal et al. 1976).

The immediate vicinity of the project area is characterized by either fine sandy outwash, fine sandy to silty outwash reworked by alluvial action of the Leech Lake River, or fine sandy aeolian deposit. Although the north side of the Leech Lake River opposite the project area is almost wholly aeolian in origin (Goltz personal communication), the presence of coarser materials in some of the test units along the project route indicates glacial outwash or more recent alluvium.

Soils of the project area are moderately to poorly drained fine sandy loams, although a few test units revealed larger components of silt and clay. The A_0 - A_1 horizons are usually < 10-15 cm. deep. The A_2 horizons are very weakly expressed and most of the test units (average depth, 55 cm.) terminated well within the B_2 horizons. In perennially damp areas (about 13% of the test units), a 20-40 cm. layer of peat covers a reducing mineral base.

The project area lies within the mixed conifer-hardwood region of Minnesota, as indicated by Marchner's map (1930) of the vegetation of the pre-logging era. The predominant tree species on the proposed cable right-of-way are hardwood: aspen, oak, and birch, with small components of maple, basswood, ash and balsam fir. Although the topography is flat to gently sloping with a net relief of < 3 meters, the higher, moderately drained areas support an understory consisting primarily of aspen sapling and hazel brush. Alder, willow, and dogwood are more frequent in the lower, more poorly drained areas. Vegetation

in the marshy areas is largely composed of cattails, sedges, and marsh grasses.

Regional Culture History

The culture history of the Upper Mississippi Headwaters region in general, and the Leech Lake-Leech Lake River-Lake Winnibigoshish sub-region in particular is not well understood, primarily because of a paucity of scientific excavations. Recently, however, as a result of intensive surveys of the reservoir shorelines of Winnibigoshish (Johnson, Harrison, and Schaaf 1977) and Leech (Johnson 1979) and excavation of a burial mound and habitation site on the former reservoir (Johnson and Schaaf 1978), it has become possible to sketch the area's prehistory.

Following Johnson, Harrison and Schaaf (1977:24-25), three major prehistoric periods are defined in the Winnibigoshish-Leech Lake area. These periods and their approximate chronological positions are as follows: (1) Early Prehistoric, terminal glaciation to 200 B.C.; (2) Middle Prehistoric, 200 B.C. to A.D. 800; and (3) Late Prehistoric, A.D. 800 to 1660. The above authors also define the following four historic periods: (1) Initial Historic, 1660-1750; (2) Fur Trade, 1750-1880; (3) Intensive Resource Use, 1880-1920; and (4) Recent, 1920 to date.

The initial occupation of the area during the immediate post-glacial period is assumed, based on evidence from surrounding regions, but not demonstrated. The local presence of big-game hunters, derived ultimately from the west, is predicted from the occurrence of their typical lanceolate projectile points and blades in southern Minnesota, in the Rainy River region and in the Lake Superior basin (Johnson, 1979:20). The presence of a fluted projectile point at the Williams Narrows Site

(21 IC 23) on Lake Winnibigoshish (Johnson, Harrison, and Schaaf 1977: 65-73, photo 25) constitutes the best evidence to date for big-game-hunter, or Paleo-Indian, occupation of this area.

The later portion of the period, known also as the "Archaic," is represented better both locally, again at the Williams Narrows Site, and in the general region. Excavation of the Itasca Bison Kill Site (21 CE 1) revealed a continued exploitation of bison by people who possessed an Eastern Archaic material culture (Shay 1971). Sites elsewhere show a pattern of broad exploitation of food resources and the appearance of new technologies, such as the "Old Copper Culture" (Johnson 1979:21).

The local manifestations of the Middle Prehistoric Period have been defined provisionally as a result of the recent surveys, but, again, more precise definitions must be drawn from regions to the north and south (Johnson 1979:21-23). Two highly significant cultural practices, the making of fired ceramic vessels and the burial of the dead in artificial mounds, constitute the major diagnostics of this period. Otherwise, the general economy and technology which had appeared in the Archaic period continued with little modification, except for localized intensification of exploitation patterns as indicated by the Laurel culture on the Rainy River and elsewhere (Stoltman 1973).

The Late Prehistoric Period (Johnson 1979:23-26) witnesses significant culture change in the general region. An initial Blackduck occupation is followed ca. A.D. 1300 to 1400 by Sandy Lake. Although these two "cultures" are defined and distinguished primarily on the basis of ceramic technology and burial practices, there are sound distributional data for assigning the former to Algonkian peoples (Evans

1961a) and the latter to the Dakota (Johnson 1979:26). Of particular note in both cultures is the practice of intensive exploitation of wild rice. This new economic adaptation had significant effects on settlement location and on both community and regional population densities (Johnson 1969a). The harvesting of wild rice was of particular importance on the Leech Lake River (see below).

Archaeological Research in the Present Project Area

In reviewing the history of cultures and of archaeological research in the region, it is necessary to devote separate treatment to the immediate area of the proposed cable corridor; that is, Mud Lake and a two-mile-long segment of the Leech Lake River downstream from the lake. Formal field work began in this area in 1938 and has continued intermittently since. As a result of that research, six archaeological sites, three of which bear official state file numbers, have been surveyed and/or sampled by excavation. One site, 21 CA 13, lies within the project area. Another, the Scott Site, 21 CA 1, was reported to lie along the proposed cable corridor. Other sources indicate, however, that the Scott Site is located almost 1½ miles farther south.

21 CA 2

In 1938, Lloyd Wilford of the University of Minnesota excavated one of three mounds at a site (21 CA 2) located on the north bank of the Leech Lake River about one-half mile below the dam (Fig. 2). The mound produced considerable pottery, two primary burials, and at least three bundle burials. Wilford (1943) concluded that the mound, whose fill contained debris from an earlier habitation site, was built over the bundle burials and that the primary burials were intrusive. The former

burials are assigned to the Mille Lacs Aspect, the latter to the Black-duck culture.

21 CA 13

During the 1938 field season, Wilford (1943:1) noted "remains of recent Chippewa camp-sites" and "a considerable amount of pre-Chippewa pottery" in the field at the east end of the Mud Lake Dam (Fig. 2). In a memo, dated November 6, 1940 (copy from Cass County file, Archaeology Laboratory, University of Minnesota), Wilford noted that Cass County was using that field as a gravel pit and that "the elevation had been reduced to the level of the road working eastward from the road and leaving a face five feet high along the eastern edge."

The gravel workers removed several human burials during their work. Although most of these burials were of historic Chippewas, at least one was prehistoric. A medium-sized pot, recovered in pieces during this operation, has been restored and is presently in the Anthropology collection at Bemidji State University. This shell-tempered vessel is of the Sandy Lake type.

The site is designated 21 CA 13 and lies at the southern terminus of the proposed cable route. At present, the field is still open and the "face" on the eastern side is readily apparent (Plate I). Shovel testing indicated that the gravel operations had removed all cultural materials from that portion of the field which the cable right-of-way crosses.

"Scott"-Peck Farm Collection

Also in 1938, Wilford recovered a large amount of pottery from a field on the "Scott Farm" on the east side of Mud Lake. The precise

location of this field varies in Wilford's reports: (1) in "Lots 1 and 2, Sec. 3, T. 143, Range 26" (1940 memo); (2) "about three miles south of the mound group" (1943:13); (3) at the lake front of the Peck farm, one mile south of the Scott farm (1959:1). All three of these locations are in general agreement and the U.S.G.S. 7.5 Minute Series Goose Lake Quadrangle shows an old field in the NE $\frac{1}{4}$ of Section 3. Therefore, the collection can be assumed to have come from a location approximately 12,500 ft. south of the Mud Lake Dam.

The Scott Site, 21 CA 1

Wilford's 1954 excavation at Mud Lake was at a site which has become of considerable significance in the prehistory of the region and which is particularly germane to this report. Therefore, the unpublished manuscript prepared by Wilford is quoted at length, as follows:

The Scott site is on the property of the late Mr. George Scott in the extreme northwestern corner of Sec. 35, T. 144-26, . . . At the lake shore an east-west road, on the section line between sections 26 and 35, meets a north-south road along the lake shore. An access road leads due south from the junction to the Scott buildings. . . .

In 1954, a test was made in a ten-foot square at the entrance to Scott's resort. . . . The square chosen was on the east side of the access road in front of a large flowing artesian well. . . . The material in the northwest corner (of the test) proved to be above a shallow circular pit, 2 ft. 8 inches in diameter. . . . The pit contained some sherds, ash and charcoal, a few pieces of bone and shell, and one large and two small pieces of birch bark (Wilford 1959:1, emphases added).

Wilford interpreted the "great quantities of ashes and potsherds" as evidence that the site was a processing station for wild rice which occurs in an extensive stand in Mud Lake. He determined that the ceramics at the Scott Site included Blackduck and two later types which he named Scott and Leech Lake wares, and which differed from each other

only in that the latter was tempered with crushed shell (1959:9-10). Today, both wares are classified as Sandy Lake (Cooper and Johnson 1964; Birk 1979). Evans (1961b) has published an analysis of the Blackduck ceramics from the site.

Since Wilford's work there, the Scott Site has been designated officially as 21 CA 1 (Norquist 1967; Streiff 1972), has been cited in many published articles, and has been nominated by the State Review Board to the National Register of Historic Places. In none of these subsequent treatments has the Scott Site's location been listed as given by Wilford (1959). The location cited most frequently (Table I) is "on the south shore of the Leech Lake River as it leaves Mud Lake;" that is, along the right-of-way of the proposed cable. The site is usually described as about 20 yards wide and $\frac{1}{4}$ -mile long.

There can be no question about the significance of the Scott Site, not only for the Mississippi Headwaters area but also for the Upper Great Lakes region, extending into Canada. The site is one of the type sites for Sandy Lake ware (Cooper and Johnson 1964; Birk 1979), and has produced one of the few and one of the earliest radioactive carbon dates which pertains both to the beginnings of wild-rice exploitation and the appearance of Blackduck ceramics. In respect to the latter, Johnson's statement is significant:

The sample (I790; U.M. 382/3) consisted of 11.7 grams of charred birchbark found in a shallow firepit which also contained charred fragments of mammalian bone, ash, and cord-marked body sherds. The sample dates the earliest Blackduck occupation of the Scott site and gave a date of 1165 plus or minus 120 B.P. or approximately 790 A.D. (1964:46, emphases added).

It is apparent that Johnson's birchbark sample is, in fact, the material that Wilford excavated in 1954 and that the Scott Site's correct

Table I. Locations Cited for the Scott Site (21 CA 1) in Published Sources and Site Files

<u>Source</u>	<u>Location of Scott Site</u>
1. Wilford (1959:1)	"extreme northwestern corner of Sec. 35, T. 144-26"
2. Nystuen (1972)	NW $\frac{1}{4}$ /Sec. 35/T. 144 N./R. 26 W. (accompanying map shows site in Secs. 22, 23, and 26)
3. Streiff (1972:14)	NW $\frac{1}{4}$ /Sec. 35/T. 143 N./ R. 26 W., "above the Mud Lake Dam"
4. Johnson (1964:45-46)	"on the south shore of Mud Lake"
5. Johnson (1969a:34)	"along a very narrow and low ridge bordering the south bank of the Leech Lake River as it leaves Mud Lake"
6. University of Minnesota, Archaeology Laboratory Site Survey Form	NE/SE and SE/SE/Sec. 22/T. 144 N./R. 26 W., "on S shore of Leech Lake R. as it exits from Mud Lake"
7. National Register of Historic Places Nomination Form	"on the south shore of Leech Lake River immediately below its exit from Mud Lake" (also shown there on separate map, continuation sheet)

provenience is the NW $\frac{1}{4}$ of Section 35. Today, an artesian well is flowing at the edge of the public access parking lot which lies just east of the old road to the Scott farm and just south of the east-west road on the section line between Sections 26 and 35 (Fig. 2, compare to Wilford's statement, above). This location is ca. 6400 ft. south of the Mud Lake Dam.

What is not apparent is who has actually conducted archaeological work and what has actually been found along the bank of the river immediately below the dam. Other than information about the gravel pit work (21 CA 13), there are not citations in the Site File except those that pertain to the Scott Site. In 1977, Patricia Schissel of the Minnesota Historical Society did find some potsherds along County Road 139 just below the dam (Scott Anfinson, personal communication, see Fig. 2).

In summary, the Scott Site is not located along the cable right-of-way but, instead, lies about 1 $\frac{1}{4}$ miles to the south. The descriptive data on the National Register Nomination Form for the site is derived from Wilford's excavation and not from any work, other than a limited surface collection, along the Leech Lake River. The archaeological record, to date, does not cite any properties listed on or eligible for inclusion in the National Register along the proposed cable corridor.

Other Sites

The most recent research along the relevant portion of the Leech Lake River has produced relatively definitive results. In his 1978 survey of a road realignment project on U.S.D.A. Forest Service lands on the north side of the river, Grant Goltz (personal communication) located three archaeological sites, immediately downstream from the

present project area. These sites, to which official numbers have not been assigned, are as follows: (1) a large habitation site with Blackduck ceramics; (2) a group of three mounds, and (3) another habitation with Blackduck and earlier (?) ceramics. These sites are located, respectively, one-eighth mile, just under three-fourths mile, and just over three-fourths mile downstream from the northern terminus of the cable corridor (Fig. 2). Goltz believes that the three mounds are undisturbed and are not, therefore, the mounds reported by Wilford (1943).

Summary

The archaeological literature and Site File data show two sites, 21 CA 1 and 21 CA 13, along the proposed cable corridor. This review has shown that the first, the Scott Site, is not located where most published citations indicate and is not, therefore, on the cable right-of-way. The second site, 21 CA 13, has an historic and one or more prehistoric components. The former component, as recorded in 1938, was confined apparently to the open field at the eastern end of the dam. Gravel extraction in 1940 removed the upper five feet of deposits, including all the cultural strata, from the portion of the field which the cable will cross. Prehistoric materials, however, may have covered a larger area and may, therefore, remain intact to the north of the field (Fig. 2).

Survey Methods

The archaeological data cited above were sufficient to predict a very high cultural-resource potential for the cable corridor. Therefore, the survey was designed to provide coverage that would be intensive both

horizontally and vertically. A total sample of the project area was accomplished by a shovel-assisted, pedestrian survey of the entire 1407 m. (4618 ft.) right-of-way.

Given the narrow width of the corridor, a single transect, progressing from south to north along the line of stakes which Dairyland Electric had placed, was employed. Because of the dense vegetation, which restricted surface visibility severely, shovel testing was conducted at a 15 m. (50 ft.) interval along ca. 86% (ca. 1215 m.) of the right-of-way.

The 81 shovel tests ranged in diameter from 30 to 50 cm., with an average of 39 cm., and from 45 to 80 cm., averaging 55 cm., in depth. Except for the 10 pits placed in marshy areas, which produced 25 cm. or more of "peat," the fill from the tests was sorted through a $\frac{1}{4}$ -inch, wire-mesh screen. Although formal profiles were not drawn, the depths of major soil units and of cultural materials were recorded in a field log.

Two segments of the corridor were not shovel tested: (1) the short segment, ca. 25 m., which crosses the county road and follows the artificial apron of the existing dam to reach the gauging station (Plate II); and (2) the northern 167 m. which cross a field of standing corn, where cultural materials were recovered from the surface, and the immediately adjacent front lawn of the Grife property where the cable will originate. In the latter case, the Grifes' report that artifacts had been found during excavation of their house foundation was deemed sufficient to indicate that cultural resources were present.

Prehistoric cultural materials were recovered from nine shovel tests, from the surface of the Grifes' cornfield and from the surface of the

county road (Table II). Only in the case of shovel tests 77 through 81 were sufficient materials present to warrant a site designation (21 CA 139, see below). Subsequent investigators should be informed that aluminum cans and/or glass bottles were placed in the bottoms of those pits.

Mr. and Mrs. Glenn Grife were interviewed on two occasions. They reported that artifacts had been found on their house lot, in their cornfield, and on County Road 139 in front of their property. Mr. Grife said that two human skeletons were found during construction of the original Mud Lake Dam in 1932. These burials can be related, with some confidence, to 21 CA 13.

Survey Results

The shovel-test transect began at the southern end of the cable right-of-way, at the point where the cable will turn west and cross the county road to the gauging station, and proceeded northeasterly to the Grife property. The following paragraphs summarize the findings, with pit numbers and distances all reckoned from the southern terminus (Table II, Fig. 2).

Although serious efforts were undertaken to overcome the poor line-of-sight conditions created by the heavy, verdant understory vegetation, neither mounds nor other above-ground constructional features were detected along the corridor. One large pit, ca. 150 cm. in diameter and 40 cm. deep, of unknown age and origin, was found 8 m. north of test #79 (see below). During casual inspection of the surface of the county road, one medium-sized, corner-notched projectile point, of a generalized Middle Woodland type, was found near test #63. Because

much gravel has been spread on the road, this isolated find is not regarded as reflecting an original cultural context.

Shovel testing did not produce evidence of significant cultural resources near the Mud Lake Dam. Only three tests, #'s 1, 10, and 12, yielded prehistoric cultural detritus (Table II). Test #1, which lies in the field at the east end of the dam, produced one flake and one sherd. Both were very small, 16.2 and 11.9 mm., respectively, in maximum dimension, and they probably represent "downward drift" from the cultural levels reported by Wilford (see 21 CA 13, above). Inspection of the field, confirmed the disturbed conditions reported by Wilford in his 1940 memo.

Tests #'s 10 and 12 each produced one small milk quartz flake. Although both of these tests are in the area of cultural remains defined by Schissel in 1977, the excavated materials are not deemed sufficient to indicate the presence of a site. They do suggest, however, that greater concentrations of cultural debris may be present in the immediate vicinity.

A similar anomalous scatter was detected at test #69 (1020 m., north), which produced two sherds, one of which is a Blackduck near-rim, from the upper 20 cm. A second pit, 45 cm. in diameter, excavated 25 cm. to the west, was sterile. Measured along County Road 139, test #69 lies 66.5 m. northeast of the vehicle trail at the Game Management Area boundary, as marked by road signs (Plate IV).

The northernmost ca. 225 m. (740 ft.) of the cable corridor crosses an archaeological site. A site form (Appendix C) will be submitted to the State Archaeologist, who has designated the site 21 CA 139. The site's length is defined provisionally from the following evidence:

Table IIa. Non-ceramic Cultural Material Recovered

<u>Provenience</u>	<u>Description</u>	<u>Size, Weight*</u>	<u>Accession No.</u>
S. T. #1 0 m. N.	trimming flake, gray chert	16.2 mm., 0.4 g.	80-2-1
S. T. #3 30 m. N.	metal scrap, 7 pieces	1.6 g.	80-2-2
S. T. #10 135 m. N.	flake, milk quartz	15.7 mm., 0.5 g.	80-2-3
S. T. #12 165 m. N.	flake, milk quartz	30.3 mm., 1.8 g.	80-2-4
S. T. #80 1185 m. N. (21 CA 139)	flake, gray chert	11.1 mm., 0.1 g.	80-2-9
	flake, gray chert	19.7 mm., 0.4 g.	
	flake, quartzite	9.9 mm., 0.2 g.	
	clear bottle glass frag. (at 5 cm.)	30.5 mm., 3.7 g.	
	bone	0.9 g.	
	bone, calcined (2)	0.5 g.	
Surface Rd. #139 ca. 930 m. N.	projectile point corner-notched, expanding stem, red-brown quartzite	43.8x18.6x8.1 mm., 5.9 g.	80-2-12

*size = maximum dimension in mm., weight in grams

Table IIb. Ceramic Material Recovered

<u>Provenience</u>	<u>Number, Weight¹</u>	<u>Description²</u>	<u>Accession No.</u>
S. T. #1 0 m. N.	1, 0.5 g.	CWP body sherd, grit	80-2-1
S. T. #69 1020 m. N.	2, 7.6 g.	1 CWP body sherd 1 Blackduck near-rim both grit	80-2-5
S. T. #77 1140 m. N. (21 CA 139)	101, 115.0 g.	18 rim and 19 near rim =1(?) Blackduck vessel; 12 CWP body sherds, remainder undetermined, all grit	80-2-6
S. T. #78 1155 m. N. (21 CA 139)	190, 189.4 g.	90 CWP, remainder un- determined; all grit	80-2-7
S. T. #79 1170 m. N. (21 CA 139)	36, 37.2 g.	18 CWP, 5 smoothed, 13 undetermined; all grit	80-2-8
S. T. #80 1185 m. N. (21 CA 139)	35, 36.8 g.	all smoothed, from 1(?) small vessel; all grit	80-2-9
S. T. #81 1196 m. N. (21 CA 139)	1, 0.3 g.	"crumb," grit	80-2-10
Cornfield surface 1196-1280 m. N. (21 CA 139)	5, 8.5 g.	1 undetermined, non- Blackduck small rim, 2 CWP, 2 undetermined; all grit	80-2-11

1. all "sherds" were saved, vast majority were very small to "crumb;" weight in grams
2. analyzed as follows: temper for all sherds, surface treatment only on larger specimens; CWP = cord-wrapped-paddle-impressed

(1) cultural material excavated from tests #'s 77 to 81 (#81, the last test, was only 11 m. north of #80), a span of 56 m.; (2) material recovered during the survey from the surface of the Grifes' cornfield, approximately 84 m.; and (3) the Grifes' report that artifacts were found on their houselot and on the road, which justifies inclusion of their yard, extending ca. 85 m. from the field to an existing power pole from which the cable will originate (Plates V and VI). Determination of the lateral extent of the site was not attempted.

The cultural material from the site (Table II) consists almost entirely of non-diagnostic body sherds. Since all sherds which did not pass through the $\frac{1}{4}$ -inch screen were saved, the sherd counts are somewhat misleading, but they do indicate a concentration in tests #'s 77 and 78. The former test produced all the diagnostic sherds in the sample, 18 rim sherds and 19 near-rims, all of which probably represent a single Blackduck vessel. Significantly, all the sherds in the total sample (368) are grit tempered. Of the 162 body sherds whose surface treatment could be determined, 122 (75.3%) were "cord-marked." Thirty-five of the 40 "smoothed" sherds came from test #80 and appear to be from one miniature (?) vessel.

Provenience data indicate a discontinuous horizontal distribution, with the heaviest concentration in test #78. The sherds from tests #'s 77 and 80 represent very few vessels. Estimates of density cannot be supplied for the cornfield or for the Grifes' yard. The Grifes' report that the frequency at which they find artifacts in the field has declined dramatically in recent years suggests that plowing has reduced severely the cultural level there.

The shovel tests produced evidence of a shallow vertical distri-

bution. In tests #'s 77 through 80, virtually all cultural material occurred in the "sod" and A₁ horizon. The majority of the sherds were recovered by shaking and scraping the sod-root material over the screen. In these pits, the A₁ terminated at 13 to 17 cm.

Provisionally, 21 CA 139 is defined as a Blackduck habitation site with a discontinuous distribution of cultural material which has a linear extent of ca. 225 m. Shovel-test data indicate that the site is quite shallow, with remains concentrated in the upper 15 cm. The data from the Scott Site and from Johnson, and the observation of large stands of wild rice in the Leech Lake River, would suggest that the site served as a seasonal ricing station. In that regard, the "pit" observed 8 m. north of test #79 may be a "jig-pot" for threshing wild rice (Johnson 1969a:32).

Conclusions and Recommendations

Summary of Cultural Resources

The review of the archaeological literature and Site File data has shown that the Scott Site, 21 CA 1, which has been nominated at the state level to the National Register of Historic Places is, in fact, not located along the cable corridor. Although the literature does suggest that a site may occur on or near the corridor for ca. ¼-mile downstream from Mud Lake Dam, shovel testing did not confirm its presence. The single flakes found in tests #'s 10 and 12 are interpreted as "scatter" and not as evidence of a site directly in the right-of-way.

The description of 21 CA 13 and of its unkind fate contained in the County Files was confirmed by the survey which produced evidence of severe disturbance in the field at the east end of the dam. It is

suggested here that the material assigned to 21 CA 1 by Schissel in 1977 and the flakes and sherd from tests #'s 1, 10, and 12 of the present survey could be related to the prehistoric component(s) of 21 CA 13.

The survey defined one sherd scatter, at test #69, and one large archaeological site, 21 CA 139, both of which require further investigation. Sufficient data were derived from the Phase I survey to define the latter as a Blackduck habitation site which may have served as a seasonal, rice-processing station. The significance of ricing in the region and along the Leech Lake River is well stated in the literature (see above), as is the general paucity of excavated data from ricing sites.

Direct Project Impacts on Cultural Resources

The effects that installing the underground cable will have on the cultural resources summarized above cannot be assessed fully from the Phase I data. Since the area of 21 CA 139 was not defined, statements about the amount of the site which will be affected cannot be generated. Both the size and the nature of the cultural resources represented by the two sherds from test #69 remain undetermined.

An evaluation of project impacts must rest, in large part, on the nature of the project. The cable itself will occupy a narrow trench, only 4 inches wide. In order to bury the cable, however, a larger right-of-way must be cleared for the vehicle which will "plow it in." Removal of the dense vegetation and the operation of the plowing vehicle will disturb the surfact along the corridor. The evidence above indicates that 21 CA 139 is a very shallow site and that even

minimal disturbance of the sod-root zone will have a considerable detrimental effect upon it.

Therefore, since placing the cable can be expected to have a serious negative impact upon cultural resources which lie in the right-of-way, additional investigations are recommended for both 21 CA 139 and the vicinity of test #69. This work should define the total area of the former and the nature and extent of the latter. These areal data will make it possible to determine the degree to which the site(s) will be affected; that is, the percent of the total site area which the corridor will cross.

Recommendations for Phase II Testing

Two recommendations for Phase II testing are offered. First, additional testing should be conducted near shovel test #69 to determine if a site is present. Such work should require one man-day and should entail a shovel-test grid. Second, substantial work should be performed at 21 CA 139 to define its areal extent, to ascertain if additional cultural components are present, and to determine the cultural activities which were conducted there. This work, which will require six man-days, should include not only further shovel-test transects but also a series of formal test squares in areas of cultural concentration.

Although the data recovered from 21 CA 139 itself are quite limited, they do, when combined with the information which has been collected from the literature and Site File, indicate that both the site and the surrounding portion of the Leech Lake River drainage may yield important cultural information for the scientific community and the public.

The Scott Site's significance has been recognized already, with respect to both cultural stratigraphy and the development of wild-rice harvesting. The several other sites in the vicinity, including two mound groups, provide a broad community context in which 21 CA 139 can be studied. Further investigation of the site may well reveal considerable data, perhaps in the form of horizontal as opposed to vertical, stratigraphy, about the distributions and adaptations of cultures in the area.

REFERENCES CITED

- Birk, Douglas A.
 1979 Sandy Lake Ware. In A handbook of Minnesota prehistoric ceramics, edited by Scott F. Anfinson, pp. 175-182. Occasional Publications in Minnesota Anthropology, No. 5. Minnesota Archaeological Society, St. Paul.
- Cooper, Leland R. and Elden Johnson
 1964 Sandy Lake ware and its distribution. American Antiquity 29:474-479.
- Evans, G. Edward
 1961a Prehistoric Blackduck-Historic Assiniboine: a reassessment. Plains Anthropologist 6:271-275.
 1961b Ceramic analysis of the Blackduck ware and its general cultural relationships. In Minnesota Academy of Science Proceedings 29:33-54. St. Paul.
- Grigal, D. T., R. C. Severson and G. E. Goltz
 1976 Evidence of aeolian activity in north-central Minnesota 8,000 to 5,000 years ago. Geological Society of America Bulletin 87:1251-1257.
- Johnson, Elden
 1964 Twenty new radiocarbon dates from Minnesota archaeological sites. Minnesota Archaeologist 26:34-49. Minnesota Archaeological Society, St. Paul.
 1969a Preliminary notes on the prehistoric use of wild rice. Minnesota Archaeologist 30:31-43. Minnesota Archaeological Society, St. Paul.
 1969b Archaeological evidence of utilization of wild rice. Science 163:276-277.
 1979 Cultural resources investigation of the reservoir shorelines: Gull Lake, Leech Lake, Pine River and Lake Pokegama. Report submitted to U. S. Army Corps of Engineers, St. Paul District. Archaeological Laboratory, University of Minnesota, Minneapolis.
- Johnson, Elden, Christina Harrison and Jeanne Schaaf
 1977 Cultural resources inventory of lands adjacent to Lake Winnibigoshish. Report submitted to U. S. Army Corps of Engineers, St. Paul District. Archaeology Laboratory, University of Minnesota, Minneapolis.

Johnson, Elden and Jeanne Schaaf

- 1978 Cultural resources investigation at the Lake Winnibigoshish Dam Site - 21 IC 4. Report submitted to U. S. Army Corps of Engineers, St. Paul District. Archaeology Laboratory, University of Minnesota, Minneapolis.

Marshner, Francis J.

- 1930 Map of the original vegetation of Minnesota compiled from U. S. General Land Office survey notes. Office of Agricultural Economics, U.S. Department of Agriculture.

Norquist, Carla L.

- 1967 Roster of excavated prehistoric sites in Minnesota. Minnesota Prehistoric Archaeology Series No. 3. Minnesota Historical Society, St. Paul.

Nystuen, David W.

- 1972 Atlas of Minnesota showing known archaeological and historical sites, including markers. Report to Minnesota Highway Department. Minnesota Historical Society, St. Paul.

Shay, Creighton Thomas

- 1971 The Itasca Bison Kill Site: an ecological analysis. Minnesota Prehistoric Archaeology Series No. 6. Minnesota Historical Society, St. Paul.

Stoltman, James B.

- 1973 The Laurel culture in Minnesota. Minnesota Prehistoric Archaeology Series No. 8. Minnesota Historical Society, St. Paul.

Streiff, Jan E.

- 1972 Roster of excavated prehistoric sites in Minnesota to 1972. Minnesota Prehistoric Archaeology Series No. 7. Minnesota Historical Society, St. Paul.

Wilford, Lloyd A.

- 1943 Mud Lake mound. Ms. on file, Archaeology Laboratory, University of Minnesota, Minneapolis.

- 1959 The Scott Site at Mud Lake. Ms. on file, Archaeology Laboratory, University of Minnesota, Minneapolis.

Wright, Herbert E., Jr.

- 1972 Quaternary history of Minnesota. In Geology of Minnesota: a centennial volume, edited by P. K. Sims and G. B. Morey, pp. 515-547. Minnesota Geological Survey, St. Paul.

Appendix A: Principal Investigator's Resume

Alan P. Brew, Principal Investigator

Address: 1001 America Avenue, Bemidji, Minnesota 56601

Education:

- 1960-65 Harvard College, A. B. cum laude in Anthropology
- 1965-69 Washington State University, admitted to PhD candidacy in Anthropology in 1968; current status ABD

Professional Employment:

- 1969-76 Assistant Professor and Chairman, Department of Anthropology, Bemidji State University
- 1976- Associate Professor and Program Director, Department of Anthropology, Bemidji State University

Professional Associations (archaeology only):

- Council for Minnesota Archaeology, charter member
- Society for American Archaeology
- American Society for Conservation Archaeology

Archaeological Field Research:

- 1959-64 American Southwest (University of Colorado, National Park Service, Museum of New Mexico)
- 1965 Snake River, Washington (field school foreman)
- 1966 Ozette Site, Washington (field school foreman)
- 1967 Ft. Tompkins, Sacketts Harbor, New York (crew chief)
- 1968-70 New Mexico (dissertation research)
- 1971-80 Director, Bemidji State University's Archaeological Field School
- 1976 Intensive archaeological testing, Lins Site, Roseau County, Minnesota; U. S. Army Corps of Engineers contract, Principal Investigator
- 1977 Archaeological testing, Warroad, Minnesota; U. S. Army Corps of Engineers contract, Principal Investigator
- 1978 Archaeological survey, electrical transmission lines, Busy Corner to Redby, Minnesota, for Minnkota Power Cooperative
- 1979 Intensive archaeological testing of harbor area, 21 CA 10, Leech Lake, Minnesota for Point View Resort

Publications and Reports:

- 1973 Review, The changing patterns of Hopi agriculture by M. Bradfield. American Anthropologist 75:461-462.
- Archaeological aspects of the Headwaters Reservoirs; The Leech Lake Reservation. In Environmental Review of the Headwaters of the Mississippi Reservoirs Projects, pp. DXI 1-42, DX 1-5. Center for Environmental Studies, Bemidji State University, Report to U. S. Army Corps of Engineers.

- 1976 (with Lynn Flinn and Christy G. Turner, II) Additional evidence for cannibalism in the Southwest: the case of LA4528. American Antiquity 41: 308-318.
- 1977 (with William J. Yourd) Final Report: Intensive Archaeological Testing of the Lins Site. Bemidji State University; Report to U. S. Army Corps of Engineers
- (with William J. Yourd) Final Report: Cultural Resources Survey of Small Boat Harbor Project at Lake of the Woods, Warroad, Minnesota. Bemidji State University; Report to U. S. Army Corps of Engineers
- 1978 (with William J. Yourd) Final Report: Intensive Archaeological Survey of Two Electrical Transmission Lines, Beltrami County, Minnesota. Report to Minnkota Power Cooperative, Inc.
- 1979 (with William J. Yourd) Final Report: Archaeological Survey of Mississippi River Park, Belle Prairie, Minnesota. Report to Morrison County Commissioners.

Appendix B
SCOPE OF WORK
ELECTRICAL CABLE CROSSING
AT LEECH LAKE RIVER

1.00 General

1.01 Cultural resources survey reports serve several functions. The technical report is a planning tool which aids in the preservation and protection of our cultural heritage. It is also a comprehensive, scholarly document that not only fulfills federally mandated legal requirements, but also serves as a scientific reference for future professional studies. As such, the report's contents should be both descriptive and analytic in nature.

1.02 The survey and reports represent partial fulfillment of the obligations of the St. Paul District toward cultural resources as required by the National Environmental Policy Act of 1969 (P.L. 91-190); National Historic Preservation Act of 1966 (P.L. 89-665); Protection and Enhancement of the Cultural Environment (E.O. 11593); Advisory Council Procedures for the Protection of Historic and Cultural Properties (36 CFR 800); Preservation of Historic and Archeological Data Act of 1974 (P.L. 93-291); and Identification and Administration of Cultural Resources (33 CFR 305).

1.03 The cultural resources survey shall focus on the study area as described in paragraph 4.01. The study shall consist of the following tasks: (1) an intensive field survey of the study area; (2) preparation of an artifact inventory; (3) an evaluation of cultural resources located within the direct-impact-zone; (4) an evaluation of the potential indirect impacts; and (5) the preparation of a detailed technical survey report.

1.04 The objective of the Phase I cultural resources survey is to identify all the cultural resources which may be affected by the implementation of the proposed project and to recommend additional testing for those resources which may be significant.

1.05 The Contractor shall provide specialized skills and knowledge during the course of the study, to include expertise in the disciplines of archeology, history, architectural history, and any other sciences as would be required. The Contractor shall also provide all materials and equipment necessary to perform expeditiously those services required of the study.

1.06 The Contractor shall designate, in writing, the name of the Principal Investigator; and the Principal Investigator shall sign the draft and final reports.

1.07 The extent and character of the work to be accomplished by the Contractor shall be subject to the general supervision, direction, control, and approval of the Contracting Officer.

2.00 Definitions

2.01 "Cultural resources" are defined to include any building, site, district, structure, object, data, or other material relating to the history, architecture, archeology, or culture of an area.

2.02 "Phase I cultural resources survey" is defined as an intensive, on-the-ground survey and testing of an area sufficient to determine the number and

extent of the resources present and their relationship to project features. A Phase I cultural resources survey will result in data adequate to assess the general nature of the sites present; a recommendation for additional testing of those resources which, in the professional opinion of the Principal Investigator, may provide important cultural and scientific information; and detailed time and cost estimates for Phase II testing.

2.03 "Phase II testing" is defined as the intensive testing of those sites which may provide important cultural and scientific information. Phase II testing will result in data adequate to determine the eligibility of the resources for inclusion on the National Register of Historic Places, a plan for the satisfactory mitigation of eligible sites which will be directly or indirectly impacted, and detailed time and cost estimates for mitigation.

3.00 Project Description

3.01 The Water Control Center, U.S. Army Corps of Engineers, St. Paul District, proposes to place an underground electrical cable in Section 22 T144N R26W, Cass County, Minnesota, where the Leech Lake River flows out of Mud Lake. The electrical cable is needed to operate a water level gaging station which will be placed near or on a water control structure at Bench Mark 1283.

3.02 The land involved in the cable placement is on the Leech Lake Indian Reservation. Special permits from the Reservation Business Committee must be obtained before archeological survey and testing can take place.

4.00 Study Area

4.01 The area to be surveyed consists of the right-of-way corridor for the underground cable. (See inclosed maps.)

5.00 General Performance Specifications

5.01 The Contractor shall conduct an intensive on-the-ground survey of the study area commensurate with the level of a Phase I cultural resources survey as described in paragraph 2.02.

5.02 The survey shall include surface inspection in areas where surface visibility allows for adequate recovery of cultural materials and subsurface testing where surface visibility is limited. Subsurface investigation may include test pits, corings, or cut bank profiles where appropriate.

5.03 Should it become necessary in the performance of the work and services, the Contractor shall, at no cost to the Government, secure the rights of ingress and egress on properties not owned or controlled by the Government. The Contractor shall secure the consent of the owner, his representative, or agent prior to effecting entry on such property.

5.04 The Contractor shall keep standard field records which shall include, but not be limited to, field notebooks, site survey forms, field maps, and photographs.

5.05 All operations of the survey shall be conducted under the supervision of qualified professionals in the disciplines appropriate to the data that are to be recovered.

5.06 Techniques and methodologies used during the survey shall be representative of the current state of knowledge for the appropriate disciplines.

5.07 The recommended professional treatment of recovered materials is curation and storage of the artifacts at an institution that can properly insure their preservation and that will make them available for research and public view. If such materials are not in Federal ownership, the consent of the owner must be obtained in accordance with applicable law, concerning the disposition of the materials after completion of the report.

6.00 General Report Requirements

6.01 Upon completion of the field investigation and research, the Contractor shall prepare a technical report detailing the work done, the results, the recommendations for further testing, and the time and cost estimates for Phase II testing.

6.02 The technical report shall include, but not be limited to, the following sections:

a. Title page: The title page should provide the following information: The type of survey undertaken (reconnaissance, intensive); the cultural resources assessed (archeological, historical, architectural); the project name and location (county and State); the date of the report; the Contractor's name; the contract number; the name of the author(s) and/or the Principal Investigator; the signature of the Principal Investigator; and the agency for which the report is being prepared.

b. Administrative Summary: The summary will be a synopsis of the report, defining the project area and the level of the cultural resources investigation. It shall summarize the research objectives and problems, methods, numbers, and types of resources identified, the significant recommendations, and any unusual or innovative findings or techniques developed during the course of the investigation. Because this information will serve both as an administrative summary and as a portion of that information required by the Department of the Interior for its annual report to Congress (pursuant to section 5.c. of the Reservoir Salvage Act as amended), the summary should be as detailed and succinct as possible. Normally the summary will not exceed one typewritten page.

c. Table of Contents.

d. Introduction: This section should include the purpose of the report; a description of the proposed project; the location of the proposed project, including a map of the general area; and a project map (a list of U.S.G.S. Quadrangle Maps which cover the project area should also be included); and the dates during which the field survey was conducted. The introduction shall also contain the name of the institution where recovered materials will be curated.

e. Environmental Setting: This section should contain a brief description of the environment of the study area, both present and past conditions, and it

should be of a length commensurate with other sections of supporting type information.

f. Survey Methods: This section should give an explicit statement of survey methods and rationale. It should describe the areas which were surveyed (types of ground cover, degree of surface visibility, etc.) whether or not the survey resulted in the location of any cultural resources, the methods used to survey the area (pedestrian reconnaissance, subsurface testing, etc.), the rationale for eliminating uninvestigated areas, the estimated size of the investigated sample and its relationship to the sample universe (e.g., 100 acres representing 15 percent of the project impact area), and the grid or transect interval used. The recommended grid or transect interval is 15 meters (50 feet); however, this may vary depending upon field conditions.

g. Summary of Regional Prehistory and History: This section should discuss the regional cultural developments in their spatial and chronological position. A brief summary of the prehistory of the headwaters area will be sufficient.

h. Survey Results: This section should describe the archeological, architectural, or historical resources encountered, including the size of the site; type of site (i.e., historic dwelling, prehistoric village, mound group, etc.); the cultural component(s) of the site (if discernible); and the general nature of the site as it existed at the time of the survey. An inventory of cultural material recovered from sites may be included in this section or added to the site survey forms. Accession numbers for collected cultural material should be included as a part of the inventory. Inventoried sites shall include a site number. Official site designations assigned by an appropriate State agency are preferred. However, if temporary site numbers will be used in either the draft or final reports, they shall be substantially different from the official site designations to avoid confusion or duplication of site numbers.

j. Recommendations: This section should discuss the direct and indirect impacts that the proposed project will have on cultural resources. It should contain the recommendations of the Principal Investigator for the Phase II testing of those resources which, in his opinion, may provide important cultural and scientific information. The recommendations shall also include a discussion of any sites, structures, or materials illustrating distinctive cultural processes which are potentially suitable for interpretive development for the public.

k. References: All references should follow American Antiquity format.

l. Appendix: This section should contain the Scope of Work and the resumes of the Principal Investigator and Field Director.

m. The above items do not necessarily have to be discrete sections; however, they should be readily discernible to the reader.

7.00 Format Specifications

7.01 Text materials will be typed (single-spaced) on good quality bond paper, 8.5 inches by 11.0 inches, with a 1.5-inch binding margin on the left, 1.0-inch margins on the top and right, and a 1.0-inch margin at the bottom.

7.02 Information will be presented in textual, tabular, and graphic forms, whichever are most appropriate, effective, or advantageous to communicate the necessary information.

7.03 All figures must be readily reproducible by standard xerographic equipment.

8.00 Submittals

8.01 The Contractor shall complete all work and services under this contract within the following time limitations:

a. Six copies of the draft report shall be submitted 30 calendar days following award of the contract, or no later than 5 September 1980.

b. The Government shall have 60 calendar days following receipt of the draft report for review and comments.

c. An original and 10 copies of the final report shall be submitted 15 calendar days following receipt of the Government's review and comments, or no later than 30 November 1980.

8.02 The Contractor shall furnish separately, as part of contract correspondence, one detailed map of the cable placement right-of-way that shows the boundaries of all cultural resources located during the survey, and their relationship to project features plus one copy of time and cost estimates for necessary Phase II testing. The map shall delimit those areas included in the survey as described in paragraph 6.02 f. One copy of the site forms shall be submitted separately as Volume 2 of the report or included as an appendix to the report.

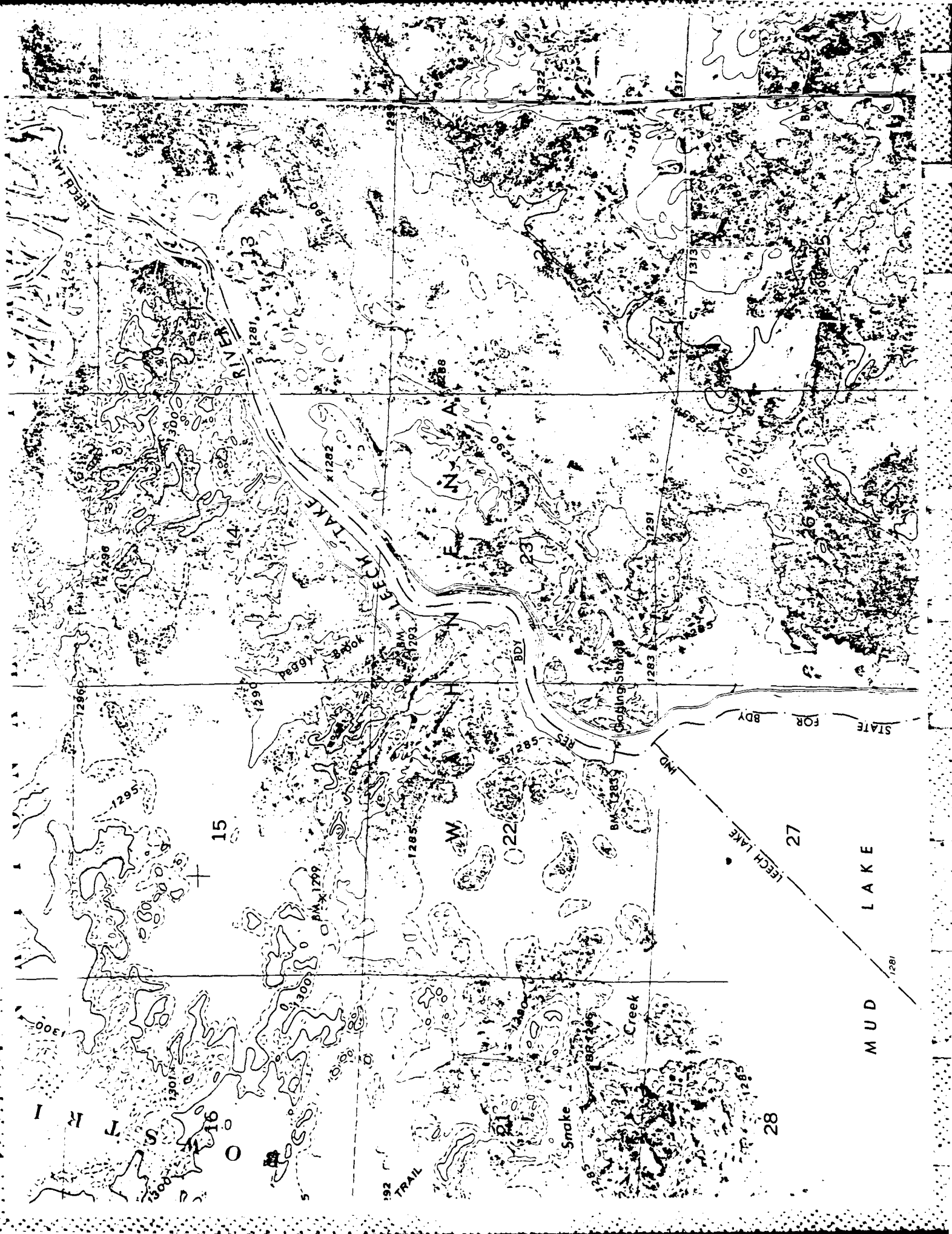
8.03 The Contractor shall submit the photographic negatives for all black and white photographs which appear in the final report.

8.04 If requested, the Contracting Officer will provide the Contractor with a letter of introduction signed by the St. Paul District Engineer explaining the objectives of the work and requesting cooperation from private landowners.

8.05 Neither the Contractor nor his representative shall release any sketch, photograph, report, or other material of any nature obtained or prepared under the contract without specific written approval of the Contracting Officer prior to the acceptance of the final report by the Government.

9.00 Method of Payment

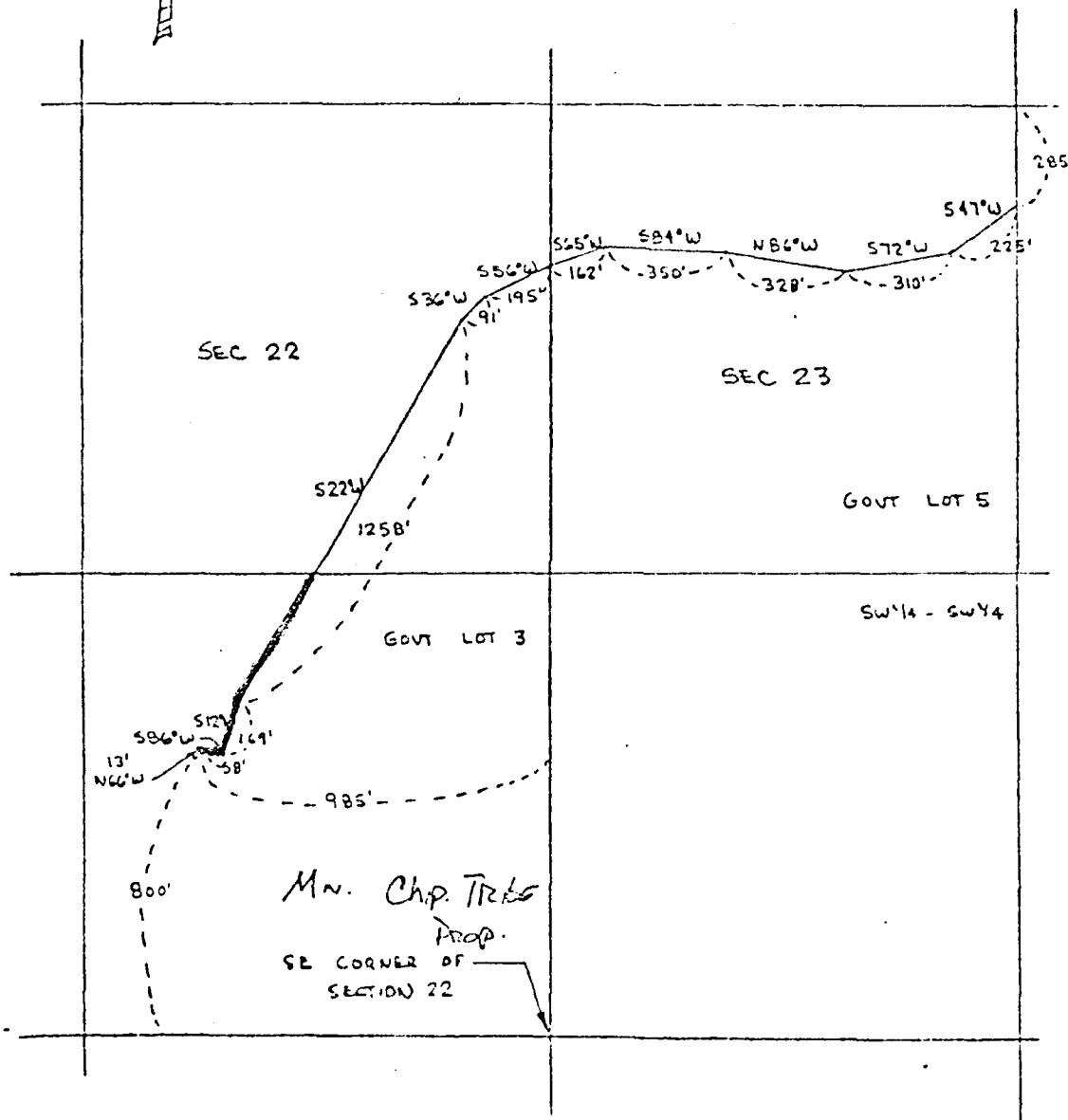
9.01 Payment for Phase I work will be made in a lump sum upon approval of the final report by the Contracting Officer.



GOVERNMENT LOTS 3 AND 5
T144N R26W OF THE 5TH P.M.



SCALE 1" = 500'



BEMIDJI STATE UNIVERSITY
ANTHROPOLOGY DEPARTMENT
ARCHAEOLOGICAL SITE REPORT

Appendix C

County Cass

Site Number 21 CA 139

Site Name Grife Site

Type of Site (Village, etc.) Habitation

Map Reference U.S.G.S. Ball Club,
Minn., Quad.

Cultural Affiliation Late Woodland, Blackduck

Location SE1, NW1 Sec. 23 TWP. 144 N R. 26 W U.T.M.

Verbal Description located on landward side of Cass Co. Road 139 along the Leech Lake River
on the Glenn Grife property, extending from his lumber yard, through
his yard and cornfield, and south into the woods

Owner and Address (Legal Description) Glenn Grife, Ball Club, Minnesota

Surface Collections and Owners Bemidji State University, Anthropology Program

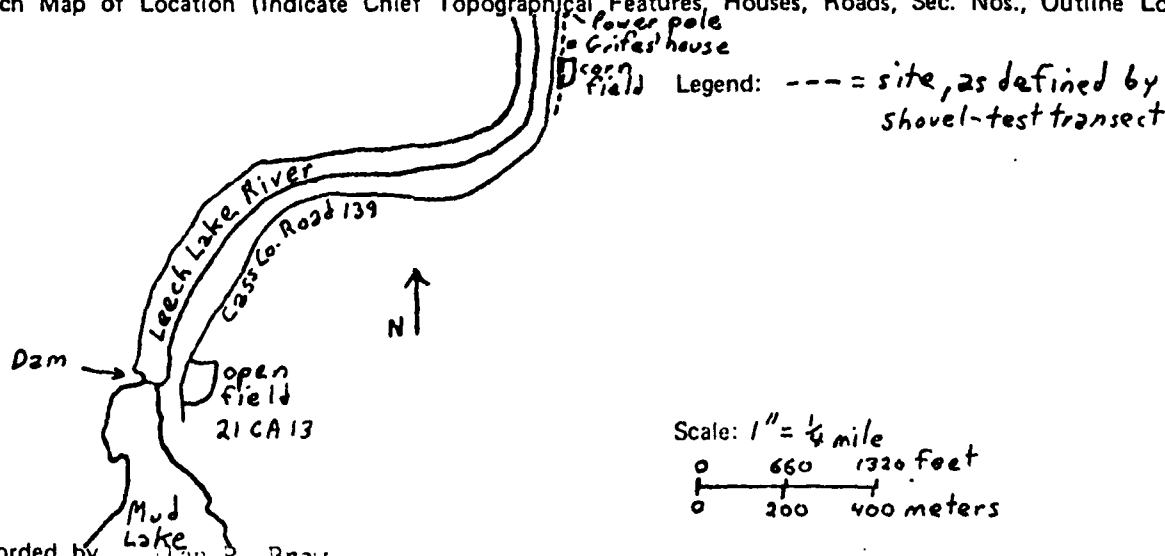
Site Description The site is a shallow (max. 15-20 cm.) habitation site, possibly a
ricing station, with a minimum length of ca. 225 m., based on shovel-test
transect; lateral extent not determined. Cultural remains appear to cover
entire length but are discontinuous in quantity.

Written References Brew (1980) report to U.S. Army Corps of Engineers, St. Paul District

Photo Numbers 80-2-1 to -9

Arch Lab Accession Nos. 80-2-1 to -12

Sketch Map of Location (Indicate Chief Topographical Features, Houses, Roads, Sec. Nos., Outline Location of Site.)



Recorded by Alan P. Brew

Institution Bemidji State University

Project Leech Lake River Cable

Date Sept. 25, 1980

BEMIDJI STATE UNIVERSITY
ARCHAEOLOGICAL SITE REPORT
DETAILED SITE DESCRIPTION

Site No. 21 CA 139

Site Name Gripe Site

County Cass

REGIONAL ENVIRONMENT

Biotic Province:

☐ Coniferous Forest ☒ Deciduous Forest ☐ Prairie

Drainage System:

☒ Mississippi ☐ Missouri ☐ Superior ☐ Hudson Bay

Regional Physiography:

☐ Till Plain ☐ Morainic Upland ☒ Alluvial/Lacustrine Plain
☐ Canadian Shield ☐ Stream Dissected Upland ☐ Major River Basin
☐ Other (Specify) _____

Remarks: along Leach Lake River on slight natural ridge; original topography of
low-lying glacial lake & outwash deposits; "ridge" is alluvial (?)

LOCAL SETTING - conditions on and adjacent to the site

Topography:

☐ Lake Shore ☒ River Terrain ☐ Elevated Prominence ☐ Beach Ridge
☐ River Floodplain ☐ Other (Specify) _____

Remarks: probable flood-plain levee

Vegetation:

☒ Forest ☐ Prairie ☐ Transitional ☒ Cultivated Lands

Dominant Species: "Big Woods"; oak & aspen dominate, a few maples

Remarks: ca. 56 m. in woods, ca. 85 m. in plowed field, ca. 84 m. in lawn, house lot
and lumberyard.

Soil/Sediment Type(s): moderately to poorly drained fine sandy loam; A₀ and A₁ horizons
usually 10-15 cm; A₂ very weak.

Site Disturbances:

☐ Erosion ☐ Previous Excavation ☒ Construction ☒ Cultivation
☐ Potting ☐ Animal Burrowing
☐ Other (Specify) _____

Remarks: ca. 85 m. in plowed field; portion of house lot, yard, and lumberyard
is disturbed.

Recorded by: Alan P. Brew

Sheet 2 of 3

Date: Sept. 26, 1980

BEMIDJI STATE UNIVERSITY
ARCHAEOLOGICAL SITE REPORT
DETAILED SITE DESCRIPTION

Site No. 21 CA 139

Site Name Griffe Site

County Cass

NATURE OF PRESENT INVESTIGATION

☒ Informant Data

Informant sheet (s) attached ☐ yes ☒ no

☒ Surface Collection

General Content: 5 grit-tempered, sherds: 2 CWP, 2 undetermined, 1 undetermined,
non-blackduck rim sherd (very small); collected from cornfield

Catalogue Attached ☐ yes ☒ no

Collective Repository: Bemidji State University, Anthropology Program

☒ Excavations

☐ Informal Testing (describe) _____

☒ Formal Testing (describe) Small shovel tests at 15 m. interval; all fill sorted
through 4-inch screen; 5 tests produced cultural material.

☐ Site Excavation (describe) _____

General Collection Content: over 300 sherds, including many "crumbs"; all diagnostic
sherds (rims & near-rims) were blackduck (except 1 from cornfield); no shell-
tempered sherds; CWP body treatment predominant

Catalogue Attached ☐ yes ☒ no

Collection Repository: as above

☐ Other (specify) _____

ARCHAEOLOGICAL SITE DATA

Site Size: unknown

Horizontal Extent: ca. 225 m. on N-S line, based on shovel-test transect & informants' report

Depth/Stratigraphy: shallow, most material from "soil"-root zone and A₁, at 10-15 cm.

Previous Investigations: none

Other Sites in Vicinity: 21 CA 13, 21 CA 2, 21 CA 1 (ca. 8500 ft. south), 3 other sites
across river (USDA Forest Service)

Best Avenue of Access: Cass County Road 139

Potential for Future Investigation: good, Phase II survey recommended in report

Recorded by: Alan P. Brown

Sheet 1 of 1

Date: Sept. 26, 1980

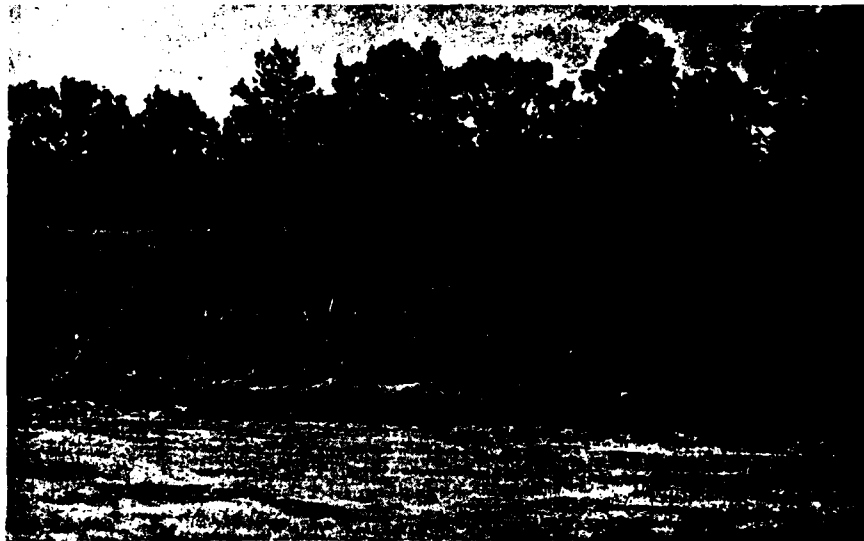


Plate I. Looking east across open field across county road from gauging station; ridge in background is at assumed natural level.



Plate II. Gauging station and dam apron from east; shovel tests were not placed on the road or the apron.

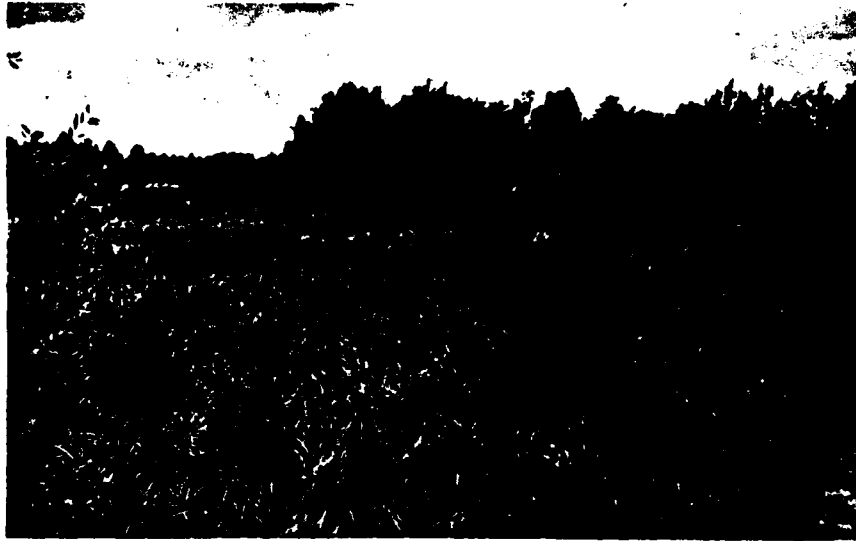


Plate III. Looking southwest across large marsh
at shovel tests nos. 51 to 54.



Plate IV. Looking southwest along county road to
vicinity of shovel test no. 69; state
game-management area boundary at head of
curve in background.



Plate V. Looking north-northeast to vicinity of shovel test no. 77; Glen Grife's mailbox along road in background.



Plate VI. Looking south across Grife's lawn to their cornfield; surface artifacts occur in the latter.

END

FILMED

3-86

DTIC